C L A I M S

1. Device for examining materials, in particular trees, other kinds of wood, and concrete, with a pulse generator (1) for generating a pulse that can be introduced into the material (2), with at least one sensor (3) adapted for being associated to the material (2) for detecting the pulse, and with an electronic evaluation device (4) for discriminating the pulse from interference pulses,
characterized in that an electronic evaluation device is associated to each sensor (3).

2. Device of claim 1, characterized in that the pulse is a mechanical and/or electrical pulse.

3. Device of claim 1 or 2, characterized in that electronic evaluation device (4) is arranged directly adjacent to the sensor (3) or integrated in the sensor (3).

4. Device of one of claims 1-3, characterized in that the electronic evaluation device (4) is a device for generating an electronic signal.

5. Device of claim 4, characterized in that the signal is an electronic, preferably digital standard pulse.

6. Device of claim 4 or 5, characterized in that the signal is transmissible to a central unit (8).

7. Device of claim 6, characterized in that the central unit (8) is a personal computer.

8. Device of one of claims 1-7, characterized in that the sensors (3) are electrically interlinked.

9. Device of claim 8, characterized in that the connection is realized by a closed-loop line or a star-shaped line.

10. Device of one of claims 6-9, characterized in that the transmission can be performed by means of a cable connection, radio waves, ultrasonic waves, or infrared radiation.

11. Device of one of claims 1-10, characterized in that a transmitter-receiver unit (12) for radio waves, ultrasonic waves, or infrared radiation is associated to each sensor.

12. Device of one of claims 1-11, characterized in that a vibration detector (10) is associated to each sensor (3).

13. Device of claim 12, characterized in that the vibration detector (10) is a piezoelectric element.

14. Device of one of claims 1-13, characterized in that a transmission pin (5) for the pulse is associated to each sensor (3).

15. Device of claim 14, characterized in that the transmission pin (5) is a metal pin, preferably steel pin.

16. Device of one of claims 1-15, characterized in that a clock is associated to each sensor (3).

17. Device of one of claims 1-16, characterized in that an identification means is associated to each sensor (3).

18. Device of one of claims 1-17, characterized in that a storage for measurement results is associated to each sensor (3).

19. Device of one of claims 1-18, characterized in that a display for the measurement results is associated to each sensor (3).

20. Device of one of claims 1-19, characterized in that at least three sensors (3) are provided.

21. Device of one of claims 1-20, characterized in that the sensors (3) are adapted for being associated to the material (2) in a geometrically independent relationship with one another.

22. Device of one of claims 1-21, characterized in that the sensor (3) or a plurality of sensors (3) is or are realized as pulse generators (1).

23. Device of one of claims 1-22, characterized in that a device for introducing pulses is associated to at least one sensor (3).

24. Device of claim 23, characterized in that the device for introducing pulses is a pin (6), preferably a metal pin.

25. Device of one of claims 1-24, characterized in that the pulse generator (1) is a hammer.

26. Device of one of claims 1-25, characterized in that the electronic evaluation device (4) includes means for self-calibration.

27. Device of one of claims 1-26, characterized in that pull-out measurement sticks are associated to the sensor or sensors (3).

28. Device of one of claims 1-27, characterized in that a rope with an angle display is associated to the sensor or sensors (3),

29. Device of one of claims 1-28, characterized in that an infrared or laser distance measuring instrument is provided.